

ABSTRACT OF THE DISCLOSURE

The present invention provides an apparatus and a method for precisely and adequately evaluating actual quality of reproduced data whenever applying a maximum likelihood decoder for converting
5 signal reproduced from a recording medium into binary signal. Based on data arrays of a pair of binary data outputted from a "Viterbi" decoder, SAM values are secured by selecting any of path-metric differential values (00) and (11) being the difference between a pair of values compared when renewing path-metric values PMM (00) and
10 (11) outputted from the "Viterbi" decoder. The minimum SAM value for an ideally-reproduced signal is outputted from a constant generating circuit. If the SAM values are verified as valid, and yet, if the SAM values coincide with the equation "input SAM values" \leq "data value outputted from the constant generating circuit", then squared values outputted from a square circuit are averaged by an averaging circuit. Finally, the average value is outputted as the reproduced signal evaluation.